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1 THIS DOCUMENT IS FOR USE ONLY AS AN EXAMPLE OF PAST WORK
2
3 use "omitted"
4
5 logit purchase covered lighting distance price
6 mat b=e(b)
7
8 egen mean_covered=mean(covered)
9 egen mean_lighting=mean(lighting)
10 egen mean_distance=mean(distance)
11 egen mean_price=mean(price)
12
13 display exp(mean_covered*b[1,1]+mean_lighting*b[1,2]+(mean_distance-100)*b[1,3]+mean_price*b
[1,4]+b[1,5])/(1+exp(mean_covered*b[1,1]+mean_lighting*b[1,2]+(mean_distance-100)*b[1,3]+
mean_price*b[1,4]+b[1,5]))
14
15 clear
16 clear matrix
17 use "omitted"
18
19 probit purchase covered lighting distance price
20 predict phat
21 egen sumphat=sum(phat)
22 sum sumphat
23
24 clear
25 clear matrix
26 use "omitted"
27
28 probit purchase covered lighting distance price
29 predict phat, pr
30 gen price_original=price
31 replace price=price_original+1
32 predict price_counterfactual, pr
33 total price_counterfactual phat
34
35 gen Q=phat-price_counterfactual
36 gen P=price_original-price
37 gen loss=.5*Q*P
38 total loss
39
40 clear
41 clear matrix
42 use "omitted"
43
44 mlogit purchase domestic mpg hp price, base(0)
45 mprobit purchase domestic mpg hp price, base(0)
46
47 clear
48 clear matrix
49 use "omitted"
50
51 mlogit purchase domestic mpg hp price, base(0)
52 margins, dydx(domestic) predict(outcome(0)) atmeans
53 margins, dydx(domestic) predict(outcome(1)) atmeans
54 margins, dydx(domestic) predict(outcome(2)) atmeans
55 margins, dydx(domestic) predict(outcome(3)) atmeans
56 margins, dydx(domestic) atmeans
57
58 mprobit purchase domestic mpg hp price, base(0)
59 margins, dydx(domestic) predict(outcome(1)) atmeans
60 margins, dydx(domestic) predict(outcome(2)) atmeans
61 margins, dydx(domestic) predict(outcome(3)) atmeans
62 margins, predict(outcome(1)) at(domestic=(0 1)) atmeans
63 margins, predict(outcome(2)) at(domestic=(0 1)) atmeans
64 margins, predict(outcome(3)) at(domestic=(0 1)) atmeans
65
66 egen mean_domestic=mean(domestic)
67 egen mean_mpg=mean(mpg)
68 egen mean_hp=mean(hp)

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69 egen mean_price=mean(price)
70
71 mlogit purchase domestic mpg hp price, base(0)
72
73 gen u_1=_b[1:domestic]*mean_domestic+_b[1:mpg]*mean_mpg+_b[1:hp]*mean_hp+_b[1:price]*
mean_price+_b[1:_cons]
74 gen u_2=_b[2:domestic]*mean_domestic+_b[2:mpg]*mean_mpg+_b[2:hp]*mean_hp+_b[2:price]*
mean_price+_b[2:_cons]
75 gen u_3=_b[3:domestic]*mean_domestic+_b[3:mpg]*mean_mpg+_b[3:hp]*mean_hp+_b[3:price]*
mean_price+_b[3:_cons]
76
77 gen prob_0=1/(1+exp(u_1)+exp(u_2)+exp(u_3))
78 gen prob_1=exp(u_1)/(1+exp(u_1)+exp(u_2)+exp(u_3))
79 gen prob_2=exp(u_2)/(1+exp(u_1)+exp(u_2)+exp(u_3))
80 gen prob_3=exp(u_3)/(1+exp(u_1)+exp(u_2)+exp(u_3))
81
82 sum prob_0 prob_1 prob_2 prob_3
83
84 egen mean_price_1=mean(price) if purchase==1
85
86 gen own_price_e_car=(1-prob_1)*_b[1:price]*mean_price_1 if purchase==1
87 sum own_price_e_car
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